

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A semiconductor device comprising:
a semiconductor layer having a crystalline structure on an insulating surface, the semiconductor layer having at least a source region, a drain region and a channel region,
wherein the channel region contains a ~~rare~~ rare gas element having a concentration gradient, and
wherein the rare gas element comprises one selected from the group consisting of Ne, Ar, Kr and Xe.
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2. (Canceled)

3. (Original) A semiconductor device according to claim 1, wherein the semiconductor device is a liquid crystal display device.

4. (Original) A semiconductor device according to claim 1, wherein the semiconductor device is an EL display device.

5. (Original) A semiconductor device according to claim 1, wherein the semiconductor device is at least one selected from the group consisting of a personal computer, a video camera, a mobile computer, a goggle type display, a player using a recording medium, a digital camera, a projector, a portable telephone, and a portable book.

6. (Currently Amended) A semiconductor device comprising:
a semiconductor layer having a crystalline structure on an insulating surface, the semiconductor layer having at least a source region, a drain region and a channel region,

an insulating film on the semiconductor layer,
wherein a ~~rare~~ rare gas element having a concentration gradient is contained between
the channel region and the insulating film, and
wherein the rare gas element comprises one selected from the group consisting of Ne,
Ar, Kr and Xe.

7. (Cancelled)

8. (Original) A semiconductor device according to claim 6, wherein the
semiconductor device is a liquid crystal display device.

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9. (Original) A semiconductor device according to claim 6, wherein the
semiconductor device is an EL display device.

10. (Original) A semiconductor device according to claim 6, wherein the
semiconductor device is at least one selected from the group consisting of a personal
computer, a video camera, a mobile computer, a goggle type display, a player using a
recording medium, a digital camera, a projector, a portable telephone, and a portable book.

11. (Currently Amended) A semiconductor device comprising:
a first semiconductor layer having a crystalline structure on an insulating surface;
a second semiconductor layer in contact with the first semiconductor layer;
an insulating film in contact with the second semiconductor layer; and
an electrode in contact with the insulating film,
wherein the second semiconductor layer contains a ~~rare~~ rare gas element having a
concentration gradient, and
wherein the rare gas element comprises one selected from the group consisting of Ne,
Ar, Kr and Xe.

12. (Original) A semiconductor device according to claim 11, wherein the second
semiconductor layer has a crystalline structure.

13. (Original) A semiconductor device according to claim 11, wherein the second semiconductor layer has an amorphous structure.

14. (Canceled)

15. (Original) A semiconductor device according to claim 11, wherein the semiconductor device is a liquid crystal display device.

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16. (Original) A semiconductor device according to claim 11, wherein the semiconductor device is an EL display device.

17. (Original) A semiconductor device according to claim 11, wherein the semiconductor device is at least one selected from the group consisting of a personal computer, a video camera, a mobile computer, a goggle type display, a player using a recording medium, a digital camera, a projector, a portable telephone, and a portable book.

18. (Currently Amended) A semiconductor device comprising:
a semiconductor layer having a crystalline structure on an insulating surface;
a gate insulating film adjacent to the semiconductor layer,
wherein the semiconductor layer contains a ~~rare~~ rare gas element having a concentration gradient along a direction perpendicular to the insulating surface, and
wherein the rare gas element comprises one selected from the group consisting of Ne, Ar, Kr and Xe.

19. (Canceled)

20. (Original) A semiconductor device according to claim 18, wherein the semiconductor device is a liquid crystal display device.

21. (Original) A semiconductor device according to claim 18, wherein the semiconductor device is an EL display device.

22. (Original) A semiconductor device according to claim 18, wherein the semiconductor device is at least one selected from the group consisting of a personal computer, a video camera, a mobile computer, a goggle type display, a player using a recording medium, a digital camera, a projector, a portable telephone, and a portable book.

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23. (Currently Amended) A semiconductor device comprising:
a semiconductor layer having a crystalline structure on an insulating surface;
a gate insulating film adjacent to the semiconductor layer,
wherein the semiconductor layer contains a ~~rare~~ rare gas element comprising one
selected from the group consisting of Ne, Ar, Kr and Xe, a first portion of the semiconductor layer having a higher concentration of the rare gas element than a second portion of the semiconductor layer, wherein the first portion is closer to the gate insulating film than the second portion.

24. (Canceled)

25. (Original) A semiconductor device according to claim 23, wherein the semiconductor device is a liquid crystal display device.

26. (Original) A semiconductor device according to claim 23, wherein the semiconductor device is an EL display device.

27. (Original) A semiconductor device according to claim 23, wherein the semiconductor device is at least one selected from the group consisting of a personal computer, a video camera, a mobile computer, a goggle type display, a player using a recording medium, a digital camera, a projector, a portable telephone, and a portable book.

Claims 28-40 (Canceled).